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## PREVENTIVE MEDICINE\*

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After four years of disaster and disappointment, the present success of Allied arms gives impetus to our planning for a post-war world. If, as we all hope, we are to prevent recurrence of the calamities of 1914 and 1939, our plans must be based on something more fundamental than present hatreds and prejudices. We cannot banish war unless we have insight into the causes of war. We must know not only those situations which influence national and political groups but also conditions which turn the thoughts of individual citizens to war as the only solution for personal as well as national problems.

Certainly in the making of the World Wars of 1918 and 1939, two major situations played a part: First, the existence of a highly industrialized nation in which in spite of the industrialization, the standard of living was not high and that of individual freedom low, with a national psychology best described as a combination of egomania and paranoia. Second, the presence nearby of other nations in which poverty, a high percentage of illiteracy and lack of any prospect of a better future were found alongside a passionate striving for liberty. In both aggressor and victim nations there were the common factors—low living standards and lack of personal freedom.

At first glance, these considerations appear to have little to do with our present subject, "Preventive Medicine," yet actually they are fundamentally connected. The standard of living of a nation is based upon its real wealth. This, in turn, depends upon the simultaneous existence of natural materials—mineral, or agricultural—manpower adequate in number and properly trained, to convert these ma-

terials into goods and a market in which to sell the goods. No one or pair of these three factors in the absence of the third can make permanent national wealth, as we have learned by the experience of two wars and the great financial depression of the early thirties. Of the three, perhaps the market is the most important.

The ultimate market for goods is the final purchaser, the common citizen. The majority of people in this world must work for their living. If they are to be purchasers of more than the bare necessities of life, they must be continuously gainfully employed. The average citizen, even in such fortunate countries as our own, has little liquid capital in the ordinary sense of the word. His real capital in the business of life is his health, and the ability to do a job. Occasionally, with continuous good health, he can be successful even if he has little ability. But even with great ability, ill health can be, and often is, an overwhelming obstacle to progress and sometimes can forever thwart hopes of a better future. Thus, since the standard of living depends on the real wealth of a nation, personal health of the average citizen can have a dominant control. It can be seen easily that no greater contribution could be made by any profession to the cause of world peace than the establishment of a program of preventive medicine, which goes beyond our present ideas of that subject and is extended to consider all stages of life of each citizen from the position of good health to that of obvious clinical illness.

Neither by tradition nor by training is the medical profession, as a whole, "prevention-minded." In general, like police forces, it acts after the event, for as police powers prevent crime only insofar as fear of apprehension and conviction deter individuals from criminal acts, so medicine, as now generally practiced, can prevent illness only insofar as fear of disabling disease makes the patient

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insist upon frequent medical examinations. Even in such cases, since knowledge of the stages between good health and clinically diagnosed illness has been neglected, the type of medical examination and its interpretation may be ineffective, despite frequent use.

The preventive medical campaign which I visualize cannot be based upon pathology and related diagnostic sciences. It must be founded on a study of the reaction of man to his environment, especially when he is free from obvious signs of sickness. To conduct such a program, we must devise and use frequently physiological methods capable of detecting the least adverse physiological trend, and we must gain such knowledge of these trends that we can stop them and reverse them before clinical illness develops.

While this form of preventive medicine has not as yet been generally practiced, a special group of physicians—full-time industrial physicians—has had and has used, during the last few years, opportunities of constant observation of many working men. It has been possible to devise simple procedures which detect physiological trends and to apply them to such large groups of workers that adequate data is available for at least tentative formulation of a few general principles. While these principles are derived from studies of men exposed to potentially harmful industrial environments, they apply equally well to harmful factors existing outside of industrial life. In brief, they can be stated as follows:

1) When a human being is exposed to a situation which can produce physiological deterioration, the rate at which deterioration progresses depends upon his condition at the moment he was first exposed to the harmful situation.

2) When the harmful situation is removed, recovery commences, and progresses at a rate depending upon the degree of physiological deterioration existing at the moment the harmful condition was removed.

3) Once deterioration commences, the rate of its development is dependent upon the intensity of action of the harmful situation.

4) Once recovery commences the rate of recovery depends upon the ability of the patient to keep away from other harmful situations and to establish conditions of rest, prop-

er nutrition, etc., which are conducive to an optimal state of good health.

These major principles have been stated in apparently obscure scientific terms, but a little thought will show what they mean.

Harmful situations need not be due to industrial or occupational hazards. They can be malnutrition, bad habits, family conflicts, financial and other worries, drug or alcohol addiction, disease, injudicious therapy (especially injudicious chemotherapy). Such situations acting with equal force upon a well man and upon a man who, by action of other factors is already showing physiological deterioration, will in a given time interval, produce a less drastic effect upon the well man than upon the other.

Situations conducive to recovery are mental peace (i. e., freedom from worry), proper nutrition, good habits, adequate rest, and, in disease, proper therapy.

It follows from these general considerations that a man suffering from disease is more vulnerable to the adverse effects of domestic worries or any of the other harmful factors mentioned. And equally, a man affected by domestic worries, malnutrition or other harmful factors is more vulnerable to disease.

It is impossible in a few minutes to discuss all harmful factors in detail. For the moment, let us concentrate on one only—malnutrition.

Because we had a high standard of living, and because we knew so much about the science of nutrition, we thought, before the war, that certain types of nutritional deficiency—especially those due to vitamin lack—existed only in the poorest and most backward areas of the country. The results of Selective Service medical examinations and recent research prove our error. Up to 40% of draft selectees examined have been found unfit for the rigorous tasks of modern war, and in the majority of cases, unfitness has been due to conditions in some way influenced by improper nutrition. Surveys of workers in war plant shows an important percentage whose daily food intake is inadequate in quantity and quality, and a further important percentage whose diet is far from the optimum associated with good health. Nor are our children much better off. A recent report from Johns Hopkins School of Medicine<sup>(1)</sup> states that of 230 children be-

tween 2 and 14 years of age, who died in the Harriet Lane Hospital from all causes, 46.5 per cent suffered from rickets. (In a group of a million similar children, this would correspond statistically to a percentage of 38 to 39). The degree of rickets present in most cases showed that it antedated the disease for which the children were admitted to the hospital.

What is the answer to this problem of nutrition? The conservatives say, "Education." Yet, we have conducted educational campaigns for years, apparently without success. Unfortunately, we still persist in assuming that it is easily possible for an average family to obtain an optimal diet. This assumption is fallacious. I would suggest that you sit down with a chart of daily vitamin requirements as set up by the National Research Council, and a chart showing the average concentration of these vitamins in ordinary foods. Try to establish for yourselves the quantities of easily available foods which are required to give an optimal intake of vitamins. Then, having reached a conclusion, modify it by these facts. First, the chart of vitamin contents of foods represents average concentrations. It fails to take into account variations with season and growing conditions in the region from which the foods are to be obtained. It fails to account for loss in transportation and handling before the food reaches many households. Second, even if the chart could give a picture of the expected vitamin content of foods as they reach the kitchen it could not consider the possible loss due to improper cooking. It has been found, for example, that more than 90% of the vitamin B<sub>1</sub> and over 80% of the C content of foods is often destroyed by cooking<sup>(2)</sup>. And vitamins B<sub>1</sub> and C happen to be frequently neglected even in the uncooked diet. Finally, try to estimate the degree of success, which in the next ten years is likely to attend an educational program aimed at remedying faulty methods of cooking, which are based not only upon ignorance, but upon prejudice and personal likes and dislikes handed down from generation to generation.

If our program of preventive medicine were aimed only at remedy of the nutritional situation it would go far to improve national health. Knowing the true situation and the

extent to which improper diet, as one adverse factor in our general scheme of physiological deterioration, can render a man more susceptible to other adverse factors, we wonder at times whether many diseases, which we term, "hereditary or familial," might not rather be the result of chronic malnutrition due to the transmission from generation to generation, of faulty diet habits—even of faulty cooking habits. How many wives cook as their mothers and grandmothers taught them? How many determined husbands insist on eating meals prepared as Mother prepared them?

The diet question is not solved completely by attention to the daily content of protein, carbohydrate, fats, and essential minerals and vitamins. The food must also be properly distributed throughout the day. It can be shown that a period of physiological improvement occurs immediately after each meal. This improvement lasts longer if the meal is high in fat or protein than if it is predominantly carbohydrate<sup>(3)</sup>. If meals are badly balanced and poorly distributed through the day, there can be periods during which one is more susceptible to the action of an adverse environment than if meal hours and the meal contents are properly timed and balanced. In industry the omission of breakfast, or a poor breakfast and poor lunch, can appreciably increase the susceptibility of workers to injurious factors in their environment. Such dietary errors are common and can affect the incidence of accidents as well as the development of abnormal physiological states.

Let us now apply this whole concept to a specific case. Imagine a young physician who, having finished his internship and had a good vacation, is about to start active general practice. First, if you can, assume that he has no financial worries, so that the slowness with which his practice develops is not a source of concern. He will not work too hard during the first few months, and he will have ample time for proper meals and rest. As his practice develops, his former regular life will become impossible. His working day will be extended beyond a reasonable eight hours. He must take his meals when and where he can, and often they will be inadequate. Night calls will interfere with sleep. He will soon show physiological deterioration. In the

course of his work he will be exposed to hazardous environments and may succumb to them. Magnify the irregularity of his life by assuming that war, reducing the number of civilian physicians, has increased the calls upon his time, and you have the situation which now exists among physicians in the Allied countries.

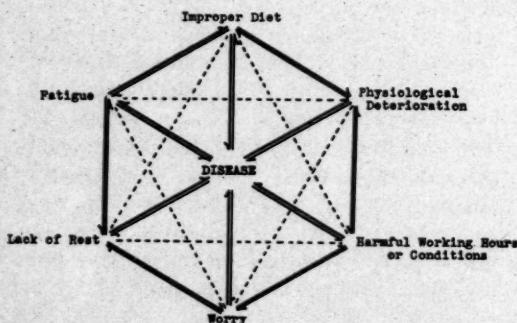
Having briefly applied the general scheme to our own profession, we can realize how it applies to our fellow citizens. A vicious cycle develops which, unless broken, can lead to serious acute illness or permanent injury. (Figure 1) If the patient has little insurance and no financial reserve, the situation is ag-

If our profession can, to some degree, reduce the prevalence of ill health, which is a major cause of poverty, illiteracy and hopelessness—the tinder which starts the fires of war—we shall not only benefit mankind as a whole, but shall contribute to the stability of the future of the medical profession. It is the existence of poverty and illiteracy which gives ammunition to those who are forever demanding socialization of medicine and regimentation of all matters pertaining to the life of the individual.

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Fig. 1



gravated—the illness may be more severe and recovery less prompt since worry has been added to the other adverse agents.

The function of preventive medicine is to break the cycle before the cycle breaks its victim. Often the most accessible point of attack, especially in the absence of organic disease, is the diet.

We would suggest that if the medical profession is to play its proper part in the brave new world of which we dream, each physician must give much more careful thought than he has given in the past to all factors in our general picture of trends from health toward disease. Further, organized medicine must formulate and operate plans for study of the apparently healthy man as he reacts to his environment. For information in beginnings of such a study, we recommend the report of the Pioneer Health Centre at Peckham, England<sup>(4)</sup>.

#### DISCUSSION

DR. M. A. TARUMIANZ, (Farnhurst, Del): I cannot let this go by without saying a word or two. I enjoyed Dr. Foulger's presentation very much. However, I think he is looking upon this matter from the standpoint of a scientist or research man only. Practically it doesn't work out so easily. It would take many generations before we have reached a point where we can control the nutrition of individuals. We have to consider the mental capacity of these individuals and we must not overlook the fact that the vast majority of the people are unable to understand these things in one or two generations. Besides it is my personal opinion that if this particular situation were so easy to handle certainly scientists and research workers could give us simple measures to treat these people without going into complicated diet measures. For instance, daily vitamin doses.

However, there are many other reasons for wars between human beings, besides the economic and political. I believe that psychology and physiology go hand in hand, since human beings are one unit. It seems to me that medical men could play their part in preventing wars, more so than the economists and politicians, if they would assume their responsibilities in their own communities in looking at the

individual patient from all standpoints, not from that of disease alone. Once the medical man has established more service to the people you will find that those who are inadequately created, the psychopaths, the feeble-minded, will be obscured in the group or eliminated and I doubt very much that there will be war. If you study the past five centuries, and the factors involved in every war, there has been in every group a psychopath with an urge to satisfy his ego thru war.

On the other hand Dr. Foulger has brought something that should be stimulating for us. I do believe preventive medicine is going to play a large role in the future.

**DR. FOULGER:** I don't think there is any difference between my point of view and that of Dr. Tarumianz. I used nutrition as an example. I mentioned family and psychic disturbances as very important. I could demonstrate to you by mathematics that the behavior of human beings in society is exactly the same as a group of electrons circulating in a given orbit around a circular nucleus. I still think that if we are ever to eliminate wars we should do it by attending to the wellbeing of the individual and not necessarily to the wellbeing of groups of individuals only. Undoubtedly if we eliminated all psychopaths we would not eliminate wars, because anyone who differed from us would be psychopathic—the very thing which we are fighting. Whatever our opinion, there is a whole realm of territory between the status of good health and the status which brings patients to us. Within that field all forms of quackery and skullduggery can operate to the disadvantage of society. Whenever it has anything to do with the health of individuals it is our problem and not one for the politicians, and we should be very wise to attend to it.

#### PRURITUS — A SIDE-EFFECT OF PENICILLIN THERAPY

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The absence of serious toxic reactions during or following administration of penicillin is one of the great advantages of penicillin. Some adverse reactions have been described, however, and as the use of penicillin proceeds,

one must be observant of new phenomena. This report deals with a reaction, which, although objectively not very harmful, caused the patient rather severe subjective discomfort. At the same time, the case presents a contribution to the efficacy of penicillin in the treatment of a pulmonary abscess.

The patient is a 60-year-old white woman who has been a patient in the Delaware State Hospital for two years for treatment of a paranoid reaction. Her medical history is essentially negative and there is no evidence of any skin or allergic condition in the past.

During the first week of May, 1944, the patient began to complain of general malaise, pain in her right chest and coughing especially during the night. Physical examination revealed signs and symptoms suggestive of pulmonary abscess. An x-ray film, taken on May 9th, showed an abscess with fluid level, surrounded by considerable infiltration in the right lung field, extending from the hilar shadow about 2/3 of the distance to the periphery. (Fig. 1). The patient's temperature rose to 102° F. Blood count revealed a leukocytosis of 17,000 with a marked increase of polynuclear cells. The hemoglobin was 67% with 3,500,000 red cells. Sedimentation index was 23 MM. Sputum cultures showed alpha hemolytic streptococci.

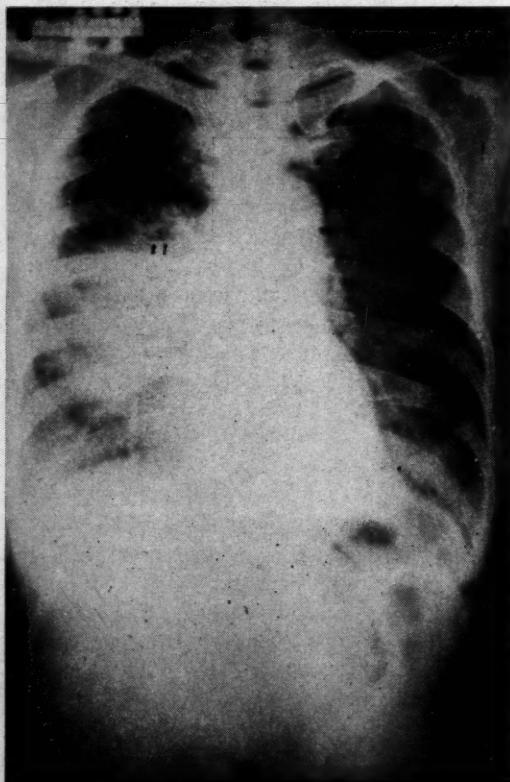
The therapeutic management started with a transfusion of 500 cc of blood. The patient was put to bed and a nutritious diet, high in proteins, was prescribed. Except for pain, pleuritic in character, the patient had no particular complaints. On May 24th, the patient had a hemoptysis, and several small hemoptyses followed during the next few days. In view of the increasing loss of weight and strength, bronchoscopy and drainage was taken into consideration. Surgical intervention, however, seemed risky in view of the patient's advanced age and her failing general condition. It was then decided to administer penicillin and to postpone an operation pending further developments. The administration of penicillin was started on May 31st. 25,000 Oxford units (Merck) were given four times daily for a period of ten days, i. e. 100,000 per day, until a total dose of one million units had been administered. No other medication was prescribed during this time.

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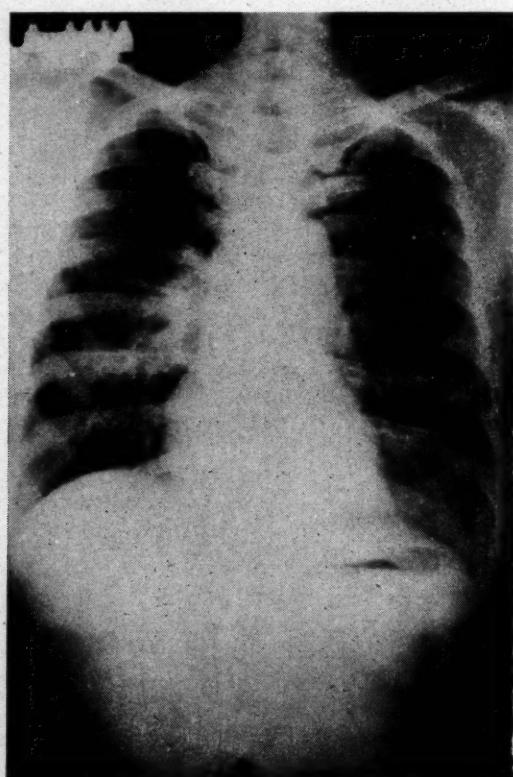
On June 4th the patient began to complain of mild itching which she described as being "all over the body." No significance was attached to this complaint at first, but during the two following days the patient became rather restless, complained of insomnia due to the discomfort from itching and numerous bleeding scratch marks were noted over various parts of the body. Careful inspection of the skin failed to reveal any eruption or visible manifestations. It was obvious, however, that the patient suffered from a rather severe generalized pruritus. She was put in a starch

ed vital to let the patient have the full benefit of a complete course. The pruritus persisted for about five days after administration of the drug was discontinued and subsided gradually thereafter.

The general response to penicillin in this case was most favorable. The clinical symptoms of infection decreased rapidly. The temperature became nearly normal, the leucocyte count came down and varied between 9,000 to 10,000 cells. The patient's appetite increased greatly and she started to gain weight. Expectoration subsided gradually. A



Pulmonary abscess; the two arrows show the fluid level.



The abscess cavity has disappeared; there is no fluid level.

bath from half an hour to an hour daily. This seemed fairly successful in relieving the itching for at least several hours during the day. It was also necessary to give the patient a sedative (nembutal) at night. Although it seemed reasonable to assume that this pruritus was a reaction to penicillin, the administration of this drug was not interrupted since it seem-

series of x-ray films showed a gradual disappearance of the abscess cavity and the surrounding infiltration (Fig. 2, 6/12/44). Urinalysis and blood chemistry did not show any significant changes throughout the illness. At the end of June the patient seemed to have recovered completely. Clinical findings were

all negative and xray examination revealed complete clearing of the lung field.

#### COMMENT

This case shows, first of all, an excellent result of penicillin therapy in a case of a pulmonary abscess. The etiology of this solitary pulmonary abscess in the right lung could not be determined. Although it is true that pulmonary abscesses have a natural tendency to heal without surgical intervention, nevertheless it seems safe to conclude that penicillin proved to be of decisive value in this case. The patient's advanced age and poor general condition made a spontaneous recovery rather unlikely. The clinical improvement started almost immediately after the beginning of the administration of penicillin.

Furthermore, this case shows the development of a rather severe pruritus during and immediately following the administration of penicillin. The circumstances under which the pruritus occurred suggest strongly that this phenomenon was a reaction to penicillin.

#### PHYSICAL FITNESS MUST BEGIN WITH PRENATAL CARE

The improvement of physical fitness must begin before birth with proper prenatal care and extend through infancy, all of the school years and into adulthood, Morris Fishbein, M. D., Chicago, declares in the December issue of *Hygeia, The Health Magazine*. He points out that the development of such a program demands a nationwide participation and depends for its success on the cooperative efforts of physicians and all the accessory medical professions, physical educators, health educators, industries and the general public. In his editorial on "The Health of American Youth," Dr. Fishbein says:

"The publication of the statistics relative to rejections under the Selective Service System has brought about a number of criticisms, often unjustified, of some of the agencies concerned with the nation's health and fitness. Hearings before Senator Pepper's Committee gave opportunity for public presentation of these figures, which were used by some of those who testified as an attack on the medical and dental professions. The claim was made that medicine and dentistry have failed because a considerable number of boys failed to

meet Selective Service standards. The significance of these failures was not clearly explained.

"Many a young man who failed to meet Selective Service standards for the armed forces is still at work doing a big job in American industry, perhaps playing on professional baseball or football teams, occasionally seated at a desk in an executive position of great productive value for the community. The existence of uncorrected hernias, flat feet, perforated eardrums, asthma and hay fever, which disqualify a man for military service, may be of little significance in a civilian capacity.

"As is pointed out by Dr. R. L. Sensenich in this issue of *Hygeia*, many of the rejections were in the field of illiteracy or for mental defects in which the services of medicine were not primarily related. Approximately one out of six men was rejected because of remediable defects. Often failure to secure remedy was due to lack of interest or willingness to accept treatment to correct conditions rather than inability to obtain needed medical services.

"At a meeting of the Governing Council of the American School Health Association, recently held in New York City, a statement was adopted disclaiming the responsibility of the school in relationship to rejections for lack of physical fitness. In its statement the American School Health Association says:

The American School Health Association feels that the marked tendency to blame the lack of adequate physical fitness upon the schools is most important and not a fair appraisal of the causes.

True physical fitness can be acquired only through a combination of heredity, the diagnosis and correction of deficiencies in early youth, intensive instruction and habituation in a multitude of knowledges and practices in health matters, and a building of muscular power and stamina through physical activities and recreation preferably out of doors. Such a program will create not only physical fitness, but a stability of mental attitudes and practices so notably lacking in our youth that it has been necessary to reject thousands of them from the armed forces.

Moreover, the figures on rejections indicate clearly that it is the defects in older age groups that make the rates of rejections so high. Among those over the age of 30 it is enormous. In other words, it seems clear that the attitudes and habits

of the individual after leaving school are the most potent factors in his physical deterioration.

"Furthermore, the *Journal of School Health* comments editorially in its issue for October, 1944, pointing out that the schools are certainly not to blame for the feeble-minded, for the psychoneurotic and the psychotic. Can the schools be blamed for those rendered unfit for military service because of the effects of infantile paralysis, rheumatic fever, diabetes, accidents, hernia, faulty vision or tuberculosis? To what extent are the schools responsible for defective teeth, overweight and underweight or deviations in skeletal and muscular development? An analysis of the rejections by ages shows strongly that the longer a man has been away from school, the higher the rejection rate in practically all categories. Of all causes for rejection the skeletal and muscular cases seem to be the group that might be benefited by a greater physical activities program in the schools. True, the total among the whole number of rejections is small. Dr. Charles H. Keene, editor of the *Journal of School Health*, feels that intensive instruction and habituation in the field of healthy living, in safety measures and in the control of infection would be of far greater value to students generally than any other type of education in the field of health and physical fitness.

"An analysis of the situation as it relates to the physical fitness of American youth indicates that the problem demands a multiple approach. Improvement of physical fitness must begin even before birth with proper prenatal care, extend through infancy with an immunization program that might prevent infectious diseases of childhood and their crippling complications, and go on through the nursery and kindergarten, where sound habits of nutrition begin to be established, carry through grade school, high school and college, in which sound instruction in health habits and physical activities, including competitive sports, should be integrated in the curriculum. Finally, when the boy or girl has left school there must be continuing participation in healthful living, sports and recreational pastimes to maintain the physical fitness that the schools have established. The development of such a program demands a

nationwide participation and depends for its success on the cooperative efforts of physicians and all the accessory medical professions, physical educators, health educators, industries and the general public."

#### FIRST MEDICAL REPORT FROM A NAZI LIBERATED NATION

Gratitude for the liberation of Belgium by the Allies and amazement at the organization of war surgery that has been built up at the front by the Allied armies is expressed by the regular correspondent in Belgium of *The Journal of the American Medical Association* in the first communication received from him since Germany occupied the country. In the October 28 issue of *The Journal* he says:

"The people of Belgium deeply appreciate the liberation of our country by the Allies. They have shown their patriotic enthusiasm for the cause of liberation and their admiration for your army. We, the Belgian physicians, wish to express also our deep gratitude to your country and our admiration for your army. We are now able to see for ourselves on our reconquered soil the amazing organization of war surgery that has been built up by the Allies at the front. Because of our experience with the hospitals during the war of 1914-1918 we can appreciate the progress achieved in the care of the wounded, and we propose to learn from contact with your medical officers the advances in war surgery that have given such good results in this war.

"I wish to write a few words regarding our experiences during the occupation: The practice of all Belgian physicians was regulated by a dictatorial order which had many arbitrary rules (for authorization to practice, location of physicians and similar matters). Fortunately these regulations were received generally with inertia, and 90 per cent of physicians continued practicing without openly protesting against the regulations, suffering vexation, to be sure, but practically ignoring their existence.

"As for the Belgian medical press, two journals continued to be published, one in Flemish and one in French. Some of the material of medical journals which were suppressed by the invaders was provisionally pub-

lished by the International Office of Medico-Military publications in the *Archives Médicales Belges* from May 10, 1940. We never could obtain any medical literature except from Germany. All papers were suppressed by the invaders. The literature that we received consisted of medical items from Swiss journals sent to us in envelopes as if they were letters.

"The nightmare is over now. The medical profession and the rest of the country are ready to resume their normal place in the world."

#### UNDER BUREAUCRATIC MEDICINE

The Governing Council of the American Public Health Association on October 4 adopted a report favoring in effect a federal plan of compulsory health insurance, without consultation with medical and dental leaders of the nation, despite a proposal to do so. This indicates, *The Journal of the American Medical Association* for October 14 declares, the attitude that may be expected of those committed to federal control of all matters in the health field if they should have control of the Washington bureaucracy that would dominate American medicine should their ideas become effective. *The Journal* says:

"At its annual meeting in New York, October 4, the Governing Council of the American Public Health Association adopted a report favoring in effect a federal plan of compulsory health insurance. . . . This report, first prepared by a subcommittee, was approved after several amendments by the association's Committee on Administrative Practice. The proposed medical service would be supported by social insurance, supplemented by general taxation, or by general taxation alone.

"The ratification of the report as amended came after extended debate in which there was opposition to the adoption and publication of the report as a stated policy of the association. Those who opposed pointed out (a) that the administration of public health in the United States was by no means so universal or so generally adequate that public health departments in general were ready for this step, (b) that before the association placed itself publicly on record in the terms of this report there should be consultation

with the most interested professional groups, particularly the American Medical Association and the American Dental Association; and (c) that the publication of the subcommittee report, its approval by the Committee on Administrative Practice and the call for adoption in the Governing Council occurred within less than thirty days elapsed time, although the subcommittee had been working on the report for a year.

"The motion to adopt the report was made at the October 2 meeting of the Governing Council and was extensively debated at that time. Action was postponed until the October 4 meeting. At that time an amendment was offered to the motion to adopt. This amendment called for the Governing Council to receive this portion of the report of the Committee on Administrative Practice and to refer it to the Executive Board of the American Public Health Association with instructions to confer with the Board of Trustees of the American Medical Association and with the American Dental Association in an attempt to arrive at a statement which these three great professional groups could support. The amendment was lost by a standing vote approximately three to one after a voice vote had left the chair in doubt. The Governing Council then proceeded to vote on a motion to adopt the report; this vote was 49 Aye and 14 No. The opposition to the adoption of the report was led by Drs. Walter A. Biering, Past President of the American Medical Association, Haven Emerson and W. W. Bauer.

"Now what is the group that adopted this report? Of the 7,493 members of the American Public Health Association 1,571 are Fellows. Only Fellows have a right to vote for governing councilors; the vote is conducted by ballot given to each Fellow when he registers at the meeting; Fellows not in attendance do not have a vote. The Governing Council consists of approximately 100 members, of whom 30 are elected by vote of the Fellows, 10 each year for three year terms; the rest of the members of the Governing Council hold membership by virtue of being section officers or representatives of affiliated (mostly state) public health associations. Members of the association other than Fellows can vote only

*(Concluded on Page 184)*

## COMPARATIVE COST OF VITAMIN MIXTURES

The multiplicity of mixed vitamin preparations that are now available in commerce has created much confusion. According to the promotion claims, each preparation is supposed to be better

## Daily Vitamin Requirements

Vitamin	National Research Council Recommended Daily Allowances*	Food and Drug Administration Recognized Minimum Daily Requirements
A	5,000 units	4,000 units
D	‡ units	400 units
B1 (thiamine hydrochloride)	2 mg.	1 mg.
B2 (riboflavin)	3 mg.	2 mg.
Niacin amide (nicotinic acid)	20 mg.	*10 mg.
C (ascorbic acid)	75 mg.	30 mg.

\* The minimum daily requirement of nicotine acid has not been established, but there appears to be fairly good agreement among those qualified to speak authoritatively on the subject that 10 mg. is approximately the minimum daily requirement for this vitamin.

† Applicable to 3,000 calories intake for adult.

‡ 400 to 800 units of vitamin D recommended for pregnancy, lactation and children under one year.

than all others. Sometimes the claims are based on some unique manufacturing technic, sometimes on the addition of minerals and often on the addition of vitamins other than those for which minimum

daily requirements have been set. For recognized claims relating to vitamin therapy the physician should consult New and Nonofficial Remedies.

During June 1944 a survey was made of multiple vitamin products offered in one of the largest department stores in the United States. The selling costs and declared contents are tabulated herewith. For purposes of comparison the price rate per hundred capsules or tablets has been based on the package nearest to 100 that is manufactured by the firms. For example, if a manufacturer provides only 50 tablet packages for one dollar, 100 of the tablets are estimated to cost two dollars. Obviously, if any firms who do not now make a package of 100 should decide to do so subsequently, such cost figures may be different—probably lower.

None of the following preparations stand accepted by the Council for inclusion in New and Nonofficial Remedies. Further, the advertising claims offered on behalf of some of the mixtures preclude any possibility of their acceptance. The accompanying table is offered solely to emphasize the importance of examining the labels and using standard reference sources such as New and Nonofficial Remedies to ascertain recognized actions and uses and to compare these with the profuse and deceptive statements prepared by the more ebullient promoters.

## Brands of Vitamin Mixture

Brand	Vitamin		Thiamine Hydrochloride Mg.	Ribo-flavin Mg.	Niacin Amide Mg.	C Mg.	Price		
	A Units	D Units					Per Package	Rate per 100	
A.B.D. Abbott	5,000	500	1	.....	.....	....	\$1.79 for 100 capsules	\$1.79	
A B D E C (Parke Davis & Co.)	5,000	500	2	2	10	75	4.86 for 100	" 4.86	
A.B.D.G. Abbott	5,000	500	1	0.4	.....	....	2.55 for 100	" 2.55	
A.B.D. Hi Potency	4,000	400	1	2	10	....	2.98 for 100	" 2.98	
A B D O L with Vitamin C (P. D. & Co.)	5,000	500	1.5	2	20	30	4.23 for 100	" 4.23	
A.B.D.O.L. Improved (Parke Davis & Co.)	5,000	500	1.5	2	.....	....	2.98 for 100	" 2.98	
Bax (McKesson)	5,000	500	1	2	10	30	2.39 for 60	" 4.00	
Dayamin (Abbott)	5,000	800	3	3	20	75	6.95 for 100	" 6.95	
Groves ABD	4,000	400	1	.....	.....	....	0.98 for 76	" 1.36	
Hepicebrin (Lilly)	5,000	500	1	2	.....	30	3.42 for 100	" 3.42	
Multicebrin (Lilly)	5,000	500	3	2	20	75	4.86 for 100	" 4.86	
Pan-Vitex (Testagar & Co.)	5,000	1,000	10	5	50	100	3.39 for 50	" 6.78	
Squibb Special Formula	5,000	800	2	3	20	75	5.00 for 100	" 5.00	
Stamms (Standard Brands)	1,667	167	0.333	0.667	3.333	10	1.69 for 96	" 1.76	
Stuart Formula (Stuart Co.)	2,500	400	1.875	1.5	12.5	37.5	2.30 for 96	" 2.40	
Unicaps (Upjohn)	5,000	500	1.5	2	20	37.5	2.96 for 100	" 2.96	
Vi Magna (Lederle)	5,000	500	3	2	20	30	3.19 for 100	" 3.19	
Vigran (Squibb)	4,000	400	1	2	10	30	3.98 for 100	" 3.98	
Vims (Lever Bros.)	1,667	167	0.333	0.667	3.333	10	1.69 for 96	" 1.76	
Vipenta Perles "Roche"	5,000	500	1	0.3	.....	30	3.73 for 100	" 3.73	
Visyneral (Adult)	(U. S. Vitamin Corp.)	4,000	570	1.5	2	10	30	8.00 for 200	" 8.00*
Vita-Kap (Abbott)	5,000	500	1.5	2	20	37.5	4.22 for 100	" 4.22	
Vitaminets "Roche"	1,667	167	0.667	0.667	5	16.67	2.45 for 100	" 2.45	
Vitamins plus (Vitamins Plus, Inc.)	5,000	500	1	2	10	30	4.89 for 144	" 6.80**	
White's Multi Vi	5,000	500	1	1	10	30	2.70 for 100	" 2.70	

\* One half or 100 capsules of a 200 capsule package contain minerals only.

\*\* Two types of capsules are required to provide the above vitamins; there are 144 capsules in a package, 72 containing vitamins A and D, 72 the other vitamins.

# Editorial

## DELAWARE STATE MEDICAL JOURNAL

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### THE CHICAGO CONFERENCE

The Annual Conference of State Secretaries and Editors was held at the American Medical Association Building, Chicago, on November 17 and 18, 1944. Dr. D. L. Cannon, Secretary of the Medical Association of the State of Alabama, was elected chairman of the Conference. The program was as follows:

FRIDAY, NOVEMBER 17—10:00 A. M.

Call to Order. James R. Bloss, Chairman of the Board of Trustees of the American Medical Association.

Address: Prepayment Medical Plans. Herman L. Kretschmer, President of the American Medical Association.

Address: Postwar Medical Services. Roger I. Lee, President-Elect of the American Medical Association.

The Functions and Operations of the Bureau of Information. Lt. Col. Harold C. Lueth, Army Medical Corps, Liaison Officer.

The Council on Medical Service and Public Relations. John H. Fitzgibbon, Chairman of the Council.

12:30 P. M. LUNCHEON, Medinah Club.

FRIDAY, NOVEMBER 17—2:00 P. M.

The EMIC Program. E. D. Plass, State University of Iowa, College of Medicine, and Thurman B. Rice, State Health Officer of Indiana.

Medical Service Plans. Robert E. S. Young, Member of Medical Service Committee of Ohio State Medical Association.

FRIDAY, NOVEMBER 17—6:30 P. M.  
Dinner Meeting of Editors of State Medical Journals. Palmer House.

B. D. Shanks, Secretary of the Medical Association of Georgia, Presiding.

Our State Journals as Molders of Opinion. Herman M. Jahr, Editor of the Nebraska State Medical Journal.

Attitude of State Medical Journals Toward Political and Social Trends That May Affect Medical Affairs. Creighton Barker, Secretary of the Connecticut State Medical Society.

Our State Journals as News Services. E. M. Shanklin, Editor of the Journal of the Indiana State Medical Association.

SATURDAY, NOVEMBER 18—9:30 A. M.  
Medical Attitudes, Opportunities and Responsibilities in a National Fitness Program. J. W. Wilce, Ohio State University and Member of Official Group of National Committee on Physical Fitness.

Radio Broadcasting by Medical Profession. A. S. Brunk, President of the Michigan State Medical Society.

While all these papers were of great interest, maximum importance attached to those of Drs. Fitzgibbon, Young, and Wilce, whose subjects fitted well together. The main point made by Dr. Fitzgibbon was that the testimony of Col. Rountree before the Pepper Committee needs considerable clarification. If this is not done effectively, the public and the legislators may get a wrong impression of the physical status of our men, perhaps blaming unjustly the medical profession.

Dr. Young's first main point was that practically without exception, every government-sponsored plan for compulsory health insurance was invented, not primarily to improve the health of the people, but to *control* the people. [Bismarck started the process in Germany in 1871, to unify his people in order to form the Deutsches Reich. In 1910 Lloyd George sponsored a similar scheme in England in order to save his political scalp: the device worked again.] Today, in this country, the regimenters in the government, with the backing of the unions, want to install a similar scheme, and for the same reason.

Dr. Young's second main point was that in setting up medical service plans it should be borne in mind that a cash indemnity plan fixes the *minimum* fee for the doctor, whereas a service plan fixes the *maximum* fee for the doctor. [The Delaware plan, operated by

Group Hospital Service of Wilmington, is a cash indemnity plan.]

Dr. Wilce's main point was that, regardless of the attitude in the past, in the future the physician must be educated to assume a far larger part in the planning and execution of a fitness program. Mentioning the Rowntree report again, he assailed the idea that the civil doctor is less efficient or skillful than his confrere in the services, and won the largest applause of the Conference with the statement that "there are too many 4F's playing football," the toughest game of them all!

The entire proceedings will be published, a part at a time, with the Organization Section of the *Journal of the American Medical Association*. Our Delaware members will do well to read these papers as they appear.

#### UNDER BUREAUCRATIC MEDICINE

(Concluded from Page 181)

on section affairs. The report on compulsory health insurance represents, therefore, the action of the subcommittee which prepared it, the Committee on Administrative Practice which approved it and the 49 members of the Governing Council who voted in its favor. Here is not a democratic practice in action; here is a shrewdly manipulated performance by full time public officials, economists, bureaucrats. Most of the names of those on the subcommittee are those of men long committed to federal compulsory sickness insurance and to federal control of all matters in the health field.

"The American Public Health Association has an obvious right to express itself on any subject related to the public health. The rejection by the majority group of the proposal for consultation with medical and dental leaders indicates the attitude that may be expected of them if they should have control of the Washington bureaucracy that would dominate American medicine should their ideas become effective. Perhaps this step in which these men had leadership will be useful in serving notice once more on the medical, dental, nursing, pharmaceutical and other professional groups as to the nature of the political manipulators in the fields of social security and public health whom the medical professions will be forced to combat."

#### BOOK REVIEWS

Minor Surgery. Edited by Humphrey Ratleston and Alan Moncrieff. Pp. 174, with 30 illustrations. Cloth. Price, \$5.00. New York: Philosophical Library, 1944.

These famous English surgeons have assembled 18 papers, by as many prominent English authors. The topics literally run from head to feet, and the articles uniformly present the concise, practical viewpoint that characterizes British teaching. Bunching all the illustrations at two places in the text will be an innovation to most American readers, as will be such English drugs as "Settol," "Ensol," and "M&B693." No American author would consider some of the procedures described as "minor," such as orthoplasty, amputation of the cervix, or bisectionectomy!

However, we like the book—it contains no excess windage—and even though we cannot agree with all its contents we find it interesting and instructive.

Metastases: Medical and Surgical. By Malford W. Thewle, M. D., Attending Specialist (General Medicine), U. S. P. H. Hospitals, New York City. Pp. 230, with 13 illustrations. Cloth. Price, \$5.00. Charlotte, N. C.: Charlotte Medical Press, 1944.

This volume consists largely of tables having the metastases of pus or tumor from its primary site to its secondary sites. As a diagnostic help in secondary abscess, embolisms, secondary tumor, etc., it could be of considerable value. The trouble with books of this kind is they are never around when you want them; we turn to the more complete texts. Yet the basic idea is good, and Thewle's book may succeed where others of its kind have failed.

It is an interesting fact that no wars of significance have ever been waged over medical problems. People have fought over about every other problem imaginable. Wars over religion, over commerce, trade and industry, over boundaries, over races and sects, over royal and legal decrees, over social and economic questions, but never over medicine. In fact, medicine has been throughout the centuries one of the great unifying agencies to bring the peoples of the earth together.—David J. Davis, M. D., *Diplomate*, Jan. 1944.

